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ABSTRACT

Written for Southern policymakers, this report forecasts economic changes in the South. It addresses demographic factors, traditional economic concerns, and emerging economic realities which already influence, or are likely to influence, economic life in the South. Trends and issues include: (1) the aging of the population largely due to retirees moving into the region; (2) the returning migration of blacks with different socioeconomic backgrounds; (3) the future change in supply of and demand for the South's labor force as a consequence of reduction in young labor market entrants and an increase in the net labor force; (4) the metropolitanization of the economy; (5) components of the "new" business climate characterized by intense competition; (6) the increasing importance of southern agriculture and lumber industries; (7) the emergence of an information economy and the need of new information infrastructures; (8) telecommuting (flexibility in the work site due to use of computer and communication technology); and (9) protection of future quality of coastal and surface waters. Each section lists policy considerations associated with the issue presented. A list of selected resources on each topic is also included. (KS)

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SOUTHERN GROWTH POLICIES BOARD

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LOOKING FORWARD:

VISIONS OF THE FUTURE OF THE SOUTH

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A REPORT OF THE COMMITTEE ON SOUTHERN TRENDS

LOOKING FORWARD:

VISIONS OF THE FUTURE OF THE SOUTH

The 1984 Report of the

COMMITTEE ON SOUTHERN TRENDS

of the Southern Growth Policies Board

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PREFACE

This publication is the first in a series of Southern Growth Policies Board monographs designed to provide insights into the likely future of the region. It identifies some of the economic, technological, demographic, and social changes likely to occur in the South; suggests long-term policy issues the region is likely to face; seeks to identify common threads which seem to lie at the root of the changes; and specifies problems that will have to be solved if the quality of life for all southerners is to continue to improve.

The report marks only the beginning of a continuing process to help policy makers take a long-range regional view of the economy and the people of the South. Each year the Southern Growth Policies Board will expand, improve, and alter the content of its report to reflect both new information and new and changing issues and trends.

It is important to recognize that this report does not profess to be comprehensive nor does it represent all of the important issues that the South will face. Further, there is no ranking intended. The trends and issues included in this report are, however, important enough to warrant consideration in current policies and undoubtedly will have to be addressed in future policy deliberations.

The information contained in this report was assembled with the help of the Committee on Southern Trends, formed in early 1984 for the purpose of producing the first annual report to the Southern Growth Policies Board on trends in the region. The Committee met for the first time in late January 1984 to establish the process and format for the report, and again in May 1984 to exchange information and to critique the issues and trends which each member brought to the meeting. The following pages reflect the cooperative products of a group of distinguished southern researchers, policy analysts, and academics working with the staff of the Southern Growth Policies Board under the overall direction of Stuart A. Rosenfeld, Director of Research and Programs.

Jesse L. White, Jr.
Executive Director

INTRODUCTION

The South, as any resident knows, is changing. At the same time, it manages to remain distinctive and familiar. This change is due to our innovativeness, our desire for progress, and growing participation in a rapidly changing world. Some changes are readily evident. Some, however, are not, because they occur slowly and go unnoticed or because they are masked by those characteristics that give the South its stability and familiarity: its history, customs, and natural conditions.

The key questions facing policy makers are how will the region's economy change and how will its people be affected? Casey Stengel once said, "I never make predictions--especially about the future." This may have been fine for Casey, but it isn't for policy makers. Virtually every policy decision rests upon assumptions about the future. The more information policy makers have on hand about possible futures, the more effective their decisions can be.

The information contained in this report is intended to help policy makers. It includes some of the demographic factors, traditional economic concerns, and emerging economic realities which already, or are likely to, influence economic life in the South. Trends and issues include (1) the aging of the population, (2) the return migration of blacks, (3) the future supply of and demand for the South's labor force, (4) the metropolitanization of the economy, (5) components of the "new" business climate, (6) the emergence of an information economy, (7) new information infrastructures, (8) telecommuting to work, (9) future markets for forest products, (10) export opportunities for agriculture, and (11) future quality of coastal and surface waters.

Some of the common threads which run through these trends already are obvious to most policy makers; some, however, might not be. First, most are aware that the average age of the population is increasing. The South is aging in part because its climate and environment attract retirees and elderly people from other regions. However, the major impact may not just be the increase in those over 65; rather, it will be those who used to be considered very old--age 80 and over, the fastest growing segment of the region's population. The eighty and over segment of the population in the South is expected to grow by about 140 percent between 1980 and 2000, nearly nine times the growth rate of the rest of the population. An increasing average age, combined with the increasing experience and educational levels and productivity of the work force, will produce greater expectations for challenging work and place more pressure on business to create jobs which utilize and reward experience and education.

Second, and common to nearly all futurists' views, is the fact that in terms of jobs, the South is moving from a production-based economy to an information-based economy. Economic projections highlight the rapid growth rate of occupations related to, working with, or producing communications devices or computers. Six out of the ten fastest-growing occupations reported by the U.S. Department of Labor's Bureau of Labor Statistics (BLS) are related to computers, and nine are related to information processing. (It should be noted, however, that the absolute

number of jobs created will remain relatively small.) Less agreement exists regarding the rate at which the overall mix of industries and jobs in the economy will be affected. Even though some prominent economists dismiss the notion that employment in the manufacturing sector is declining, the fact remains that employment among production workers is still far below its pre-recession high. In contrast, employment in service occupations is growing rapidly. Public policies, such as those which provide a supportive technical, financial, educational, and management infrastructure will influence the rate of growth of new information-based industries.

Third, most trends and forecasts take into account the rapidly growing internationalization of the world and regional economies. Expanding world markets and intensifying competition are affecting most southern industries. The forecasts for both agriculture and forestry, for example, are based on the growth of world markets, with the U.S. maintaining its present share. Competition from Canada, however, has already made inroads into softwood markets. In addition, internationalization increases the need for an information infrastructure to facilitate effective participation in world markets.

Fourth, the South's economy is being restructured around metropolitan centers. Despite the growing attractiveness of small towns and villages and their expanding information links to the rest of the world, most new and emerging industries require and/or desire the technical, educational, and cultural infrastructure that only larger cities are able to provide.

These general trends present ample opportunity for the South to flourish, but they also portend problems. First, the forecasts suggest widening dichotomies within the region between those employed in high skill and knowledge occupations and those employed in low-skill, production or service work; between those living in cosmopolitan urban centers and those residing in isolated rural areas; and, more generally, between wealthy and poor individuals, businesses, and communities. The growing disparities are showing up, for example, in differences between the poor elderly and well-to-do elderly in the region and between those blacks returning to the South who have become successful in the North and those returnees who have not been successful.

One cause of disparities will be the nature of the work in growth industries. The information-processing industry, as well as other emerging industries, will create many new jobs over the next twenty years, but, along with international competition, will eliminate many others. Competition and automation will eventually lead to the elimination of a large share of the standardized production jobs which do not require high levels of education, while retaining and creating professional, technical, and highly skilled jobs as well as service occupations. The demand for low-wage service work, however, is projected to be much higher than the demand for high-wage technical and skilled work through the duration of this century.

Individual communities also will experience quite different rates of growth. Technology-related industrial growth, for all its promise, seems to be predominantly a metropolitan phenomenon dependent on centers of expertise that create jobs in and near selected urban areas, especially those with strong university or research centers. Even if technology can accelerate economic growth, benefits will not necessarily be uniformly distributed around the region. Similarly, not all businesses will have the expertise, capital, and information to take advantage of expanding world markets and technological innovations. Despite the increased emphasis on entrepreneurship and small business development, the long-term result is likely to be an increase in the concentration of resources and capital in both agriculture and industry among fewer businesses and fewer locations.

A second problem is that pressure to achieve economic growth in an increasingly competitive international economy could lead to insufficient attention to the potential long-term impact on the environment. Deterioration of water quality is but one example of an unintended and undesired consequence of growth. Production processes and lifestyles that do not take into account the accumulation and disposal of by-products could impair future growth in the economy, as well as the quality of life.

While the trends and forecasts in this report are based on the best existing information and expertise, both events and actions can alter the predictions. Unanticipated changes in national and world conditions and public policies can change the assumptions on which the forecasts are made and thus affect the outcomes. In 1963, for example, the U.S. Census Bureau, usually quite reliable in its projections, completely misjudged school enrollments in the seventies. Based on its projections, the odds for the actual late-seventies enrollments was on the order of one in a half million. Why? It failed to predict the increasing number of women entering the labor force, delayed child-bearing and improvements in birth control methods. On a lighter note, Variety predicted in 1955 that rock and roll would be gone by June! And, in 1936, Irving Thalberg, MGM executive, rejected the rights to Gone with the Wind stating "...no Civil War movie ever made a nickel."

Past inaccuracies are no reason to avoid looking ahead. However, they do emphasize the need to understand the assumptions under which forecasts are made. States need this knowledge to plan for their best possible future--to maximize economic growth and to minimize consequences which exacerbate inequities or lower the quality of life. States clearly have much to gain from looking ahead at possible futures and have an important role in making sure that short-term goals do not have costly long-term consequences and that all Southerners benefit.

THE SOUTH IS "AGING" FASTER THAN THE REST OF THE NATION.

The age profile of the population in the South will shift considerably in coming decades, which will alter the demand for goods and both public and private services. Between 1980 and 2000, the region's population is expected to increase by 34 percent, from 68 million to 91 million. The over-65 population in the region is expected to increase by 63 percent, from 7.7 million to 12.6 million. The over-80 population, however, will grow the fastest, by 140 percent, from 1.4 million to 3.4 million. As with the black return migrants, the elderly in the South are characterized by a bimodal distribution: those who are elderly and poor and those who are wealthy enough to retire and move South to enjoy the climate and cultural amenities geared toward the elderly.

Table 1

Population Growth

Age 80 and over

	Percent of Population Age 80 and over 1980	Estimated Percent of Population Age 80 and over 2000	Percent Change 1980-2000
SGPB-South	2.1	3.7	140
United States	2.3	3.8	95
Alabama	1.8	4.1	359
Arkansas	2.6	4.0	91
Florida	3.1	5.4	213
Georgia	1.7	3.4	148
Kentucky	2.2	3.5	90
Louisiana	1.7	3.1	119
Mississippi	2.1	3.5	92
North Carolina	1.8	4.1	168
Oklahoma	2.6	3.8	95
Puerto Rico			
South Carolina	1.5	3.6	194
Tennessee	2.1	3.8	112
Texas	1.8	2.7	111
Virginia	1.8	3.4	124

Source: National Planning Association, 1984

The popular perception is that more affluent elderly are attracted primarily to specific locales, such as Florida and the Rio Grande Valley of Texas. A recent study of the elderly added to the population of Georgia since 1980, however, reveals that 40,000 out of 46,000 moved into the state to enjoy retirement years. (The elderly population of Georgia increased by 9 percent between 1980 and 1983, while the school

age population decreased by more than 4 percent.) Western North Carolina also attracts large numbers of retirees. Thus the affluent elderly seemingly are becoming more dispersed around the region, spreading the South's growing share of public retirement and transfer income. In 1980, public retirement income amounted to about nine percent of personal income in the region.

Although the elderly are becoming more affluent on the average, the poor among the elderly population tend to be very poor. One out of every seven persons over the age of 65 lived below the poverty level in 1981. Poverty rates for blacks over 65, however, were about one out of every three. Sources of earnings in part explain this difference. Non-minority elderly households have considerably more property income. About 37 percent of income in white elderly households comes from property, compared to only 5 percent of the income of black elderly households.

As the elderly population grows in size and improves in health, there will be an increasing desire and ability to remain in or reenter the labor force. In 1981, about 16 percent of all those over 65 worked, with the largest sources of employment being retail trades, services, and self-employment. Slightly over half of those employed worked part-time. Funds set aside in new education and training legislation specifically for retraining older workers for employment provide sources of support. Despite the attention to retraining the elderly, their role in the labor force may be less than anticipated. Even though the number of new labor market entrants will drop in the 1990s, the elderly will be competing with the burgeoning 35-54 age bracket who have both sufficient experience and relative youth on their side. Unless the occupational demand increases faster than anticipated, or unless age barriers to work lessen, opportunities may be scarce.

Policy Considerations:

(1) the need for health care and other social services;
(2) impact of transfer payments to the elderly on local economies;
(3) increasing demand on public retirement funds;
(4) increasing availability of part-time, experienced workers;
(5) demand for low-cost, accessible housing and transportation;
(6) demand for educational and cultural programs for the elderly; and
(7) impact of a large elderly population, many with roots outside the South, on tax referenda and bond issues.

MORE BLACK SOUTHERNERS ARE COMING HOME.

The return migration of blacks to the South has been noted by demographers in their scholarly journals for a decade but has not been generally acknowledged by policy makers. Between 1965 and 1970, the South lost a net of 216,000 blacks to other regions; between 1975 and 1980, the region gained a net of 195,000 blacks. During that latter five-year period in North Carolina, four out of every ten black in-migrants were returning to their native state.

The first characteristic of the return migration is its duality. There seem to be two distinct populations returning--those who have become economically successful and those who were not able to find work. This creates a schism between upper and middle class blacks and those below the poverty level. In-migrants were more likely than other blacks to be employed as professionals, but they were also more likely to be to unemployed.

A second characteristic is the tendency for black females to return to rural areas and black males to return to southern cities. Returning women are more likely to be poor, contributing to the increasing feminization of poverty. About 34 percent of the single women returning are not in the labor force; 84 percent of single women returning receive no public assistance. The men in their lives often remain in the urban centers of the North, leading to a third characteristic, the geographic dispersion of in-migrant families. Many couples maintain split residences, with husbands in the North and wives in the South, with children alternating between the two regions, living with parents or other close kin.

The impact of this trend does not come through from the numbers alone. It is more evident in the reasons for the moves and the characteristics of those returning. Thus the forecast of the long-term issues is based on observations and face-to-face meetings in order to obtain the views directly from those who comprise this "trend." Discussions with a relatively large sample of blacks in eastern North Carolina indicate that the trend is not adequately reflected by current numbers; every person interviewed mentioned at least five relatives or friends in the North planning to return. In summary, it appears that this trend of blacks returning will continue to alter the demographic composition of the South for some time.

Policy Considerations

(1) the mobility and related educational needs of some black children;
(2) demand for occupational training for returnees;
(3) need for day care for in-migrating women with children; and
(3) the growing economic schism between returning upwardly-mobile blacks and poor blacks--particularly female heads of households.

THE COMPOSITION OF THE SOUTH'S LABOR FORCE WILL CHANGE.

Despite the projected impact of automation, most of the economic growth in the South will depend on the size and quality of its labor force. A number of trends alluded to in the previous sections are expected to affect the South's labor force. The total labor force in the South probably will not decrease as much as demographers project for the rest of the nation. The labor force growth rate for the U.S. in the 1970s was 1.7 percent; in the 1990s it is forecast at 1.0 percent. The number of youth entering the labor force will drop in all the SGPB states except Texas and Oklahoma in the 1990s (see Table 2), although the percentage decrease for the region will be less than the national average.

Table 2

Projected High School Graduates, Thousands

	1983-84	1992-93	1999-2000	PERCENT CHANGE 1984-2000
SGPB-South	738.4	723.0	862.9	17
Non-South	2179.9	1574.4	1814.1	-17
United States	2918.3	2297.4	2677.1	-8
Alabama	39.1	37.0	39.4	1
Arkansas	26.2	25.7	23.3	-11
Florida	92.2	90.6	119.6	30
Georgia	58.9	53.7	58.9	0
Kentucky	42.7	37.1	37.6	30
Louisiana	48.9	47.1	58.3	19
Mississippi	25.8	22.8	23.6	-9
North Carolina	66.1	58.4	61.6	-7
Oklahoma	34.5	35.9	48.3	40
South Carolina	38.3	34.5	37.8	-1
Tennessee	46.6	41.1	42.9	-8
Texas	159.1	189.7	255.4	61
Virginia	60.0	49.4	56.2	-6

Source: Western Interstate Commission for Higher Education, 1984

Despite the reduced proportion of teenagers, growing numbers of new labor market entrants and reentrants (including displaced homemakers, return migrants, older persons, and those who are not permanent workers but enter and leave the labor force as economic conditions change) may increase the net labor force. Thus the South will continue to have a more rapidly growing if somewhat less experienced labor force than the nation. Although the size of the region's secondary labor force has been declining as more workers move into the primary labor force, the temporary (secondary) workers remaining are substantial enough in number to absorb many new primary jobs.

There are two possible consequences of these projected demographics. First, the combination of the two trends (reduction in young labor market entrants; increase in the net labor force) will result in an increase in average experience levels, educational levels, expectations, and aspirations of the work force. This ought to improve

the quality and productivity of the labor force. But if the demand for workers in skilled occupations does not keep pace, as many predict, the result will be an imbalance between job requirements and skills. Workers will be "overqualified" for many of the available jobs. This could create the illusion among policy makers of "overeducation," and lead to resistance to needed increases in education expenditures aimed at the general population and to the reinforcement of tracking in the schools.

The other consequence is that unemployment rates could remain significantly above "full employment." If the labor force grows faster than that of the rest of the nation, and if the secondary labor force absorbs a significant number of the new jobs that are created, the supply of labor could continue to exceed demand. This is more likely to be a problem in rural areas, where the secondary labor force is larger and jobs will be more scarce.

Policy Considerations

(1) increasing demand for unemployment insurance and lengthening of average periods of unemployment;
(2) impact of changes in the composition of the labor market, with more older and experienced workers;
(3) the challenge to provide quality education and equal opportunity despite the possibility that skill requirements of work will not require it;
(4) pressures for a shorter work week to create more employment opportunities; and
(5) increased need for job creation.

METROPOLITAN AREAS WILL BE THE CENTERS OF FUTURE SOUTHERN GROWTH.

The South's economy is increasingly going to be linked to the development of its metropolitan centers. As work underway at the Southern Growth Policies Board illustrates (see Figure 1), metropolitan centers within the South grew much faster in the late 1970s than nonmetropolitan areas. Moreover, nonmetropolitan counties adjacent to metropolitan areas have grown faster than non-adjacent counties. The growth will continue, but more important, it will go well beyond the simple accumulation of new businesses which characterized recent industrialization; the formation of new growth centers will be qualitatively different because it comes during a period when the nation's and the South's economies are rapidly restructuring.

The restructuring of the region's economy will have an impact on the location, type, mix, and longevity of the industrial plants and offices of the southern economy well into the twenty-first century. For example, the southern economy will become more strongly defined by industries which specialize less in mature product manufacturing, rely less on low-cost labor or depletable natural resources, depend less on externally headquartered corporations or investors, and focus more on international markets. Metropolitan growth in the future will be characterized by the ability to produce more of what once was imported, the ability to compete on an international level, and the ability to generate new businesses based on local resource endowments.

As the South's economy grows in size and density around its metropolitan centers, these centers will acquire the capacity to produce more of what they once imported. One example is that automobile companies in Detroit, Stuttgart, or Tokyo now find it necessary to locate assembly plants near growing southern markets. More important, this trend will lead to opportunities for expansion and entry of small retailers, wholesalers, service firms and a complex variety of sustainable, viable urban enterprises. Selective stimulation of industries whose products and services substitute for those now imported can reduce the outflow of dollars, and build new connections to other markets. This process will have a significant effect on the mix and diversification of industry.

Internationalization will also have an impact on urban growth. As the nation's economy becomes more internationalized and discovers its comparative economic advantages, so will its individual metropolitan economies. Cities in the South will find themselves competing with other cities around the world with similar economies, as they now compete with cities within this country. This is particularly true of those new metropolitan areas which are becoming rapidly internationalized while in their formative stage.

Last, the structural pattern and configuration of growing metropolitan centers, including the complementary array of supportive economic, educational, and social services supplied in these centers, will afford maximum opportunity for entrepreneurial and innovative activities. Small business and technological development, already recognized as an important part of the region's future, will loom even larger in the growth of metropolitan centers. Enterprises that a

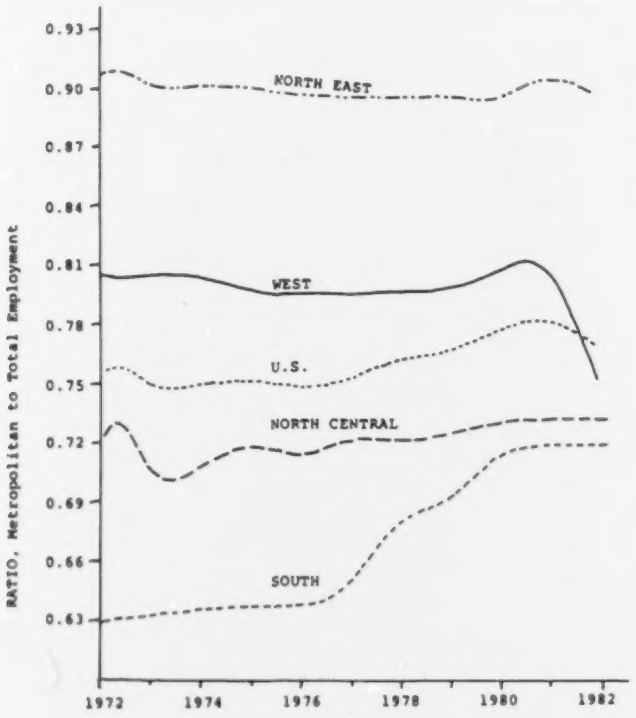
creative city generates are more tightly linked to other producers and/or customers, and thus to specific locations.

These characteristics take on policy importance when one realizes that individual metropolitan economies are functional groupings of local resources, economic sectors, and institutional arrangements which link each with all other local and metropolitan economies in a statewide web. The threads of this web are simultaneously interwoven into the southern, national, and international economies as well. Each metropolitan center, however, is a unique economy which must be understood, and the specific industrial strengths of one city cannot be simply transferred to any other city.

Policy Considerations

(1) need for new forms of infrastructure investment in southern cities;
(2) importance of supportive environments for new business development as metropolitan economies develop;
(3) the need to stimulate selected industries to provide needed goods and services locally; and
(4) the need to distinguish among, and support the needs and functions of, individual metropolitan centers.

Figure 1. RATIO OF METROPOLITAN EMPLOYMENT TO TOTAL EMPLOYMENT, BY REGION, 1972 to 1982.



THERE WILL BE A NEW BUSINESS CLIMATE FOR INDUSTRIAL GROWTH.

Most southern states are endeavoring to redefine and reshape their industrial development strategies in light of anticipated and hoped-for shifts in the region's economy. The fervor of these efforts is kindled, in part, by an environment of intense competition. The conditions which comprise the "business climate" required to promote growth are becoming more important and different from the past. Given current forecasts, the states probably will increase their efforts in the areas of education, identification and utilization of new technology and knowledge, venture capital, and innovative ways to coordinate those key areas.

The most fundamental factor in industrial development in the future will be the quality of education. The obvious effects are to produce a more productive, adaptive, and motivated labor force; more sophisticated benefits will be more effective decision makers and innovators. Moreover, as the aspirations and expectations of the general public for schooling increase, the overall quality of elementary and secondary school system also will become more important to an area's attractiveness. Further, as the population ages and the content of work changes, states' educational systems will address lifelong educational and retraining needs. The importance of education to the industrial "business climate" undergirds the remaining points.

New technology will undoubtly have a large and increasing impact on economic growth in the region. Growth, however, will not be only in what are generally considered high-tech industries. Scientific developments are occuring across a broad range of conceptual fields, many of which hold significant implications for even the most traditional industries in the South. To share in the high-tech benefits, state governments can identify opportunities to help traditional industries apply the most advanced scientific knowledge, perhaps through university-industry partnerships. New applications of scientific knowledge to technical sectors will be called upon to preserve the competitiveness of traditional industries under international economic pressures. As technologies with potential commercial application are identified, it will become increasingly common for plants to be established as experimental prototypes.

The application of science and technology to industrial processes will not be limited to the natural and physical sciences. Social science contributions may be even more significant for promoting economic efficiency and avoiding high social costs. Social science disciplines create new knowledge of management-worker relationships, productivity, community-industry interaction, family functioning, and institution-building -- all of which will play vital roles in stimulating industrial productivity and creating a favorable environment for quality economic growth. Higher education thus will play an even larger role in future economic development than currently.

Another projected shift in the elements needed for new growth in the South is an improved venture capital capability. Some of the venture capital will have to be targeted to specific regions and sectors of a state's economy which are undercapitalized through normal market

functioning. Venture capital firms provide a unique mix of capital needs and management expertise to firms with long-term growth potential. The Economist recently reported that the average venture capital firm has earned roughly 50 percent on its equity, which may imply that too little capital is being devoted to the venture capital market in some areas. In other words, some potentially successful entrepreneurial efforts may still not be receiving the mix of capital investment that is justified by the market.

The evidence seems clear that the spirit of entrepreneurship is already growing and contributing to a significant growth in small business in the South. The ability of individual states and localities to share in the new growth, however, will depend in part on public policies which stimulate entrepreneurship and assist, where appropriate, with training, product development, and technical assistance. Creative public-private sector partnerships will be formed to meet these ends and the long-term needs for capital. The challenge for southern states will be to assist local development in areas in which chronic unemployment and underemployment persist so that the advantages of new jobs and income will be more balanced.

New institutional/administrative designs will be suggested to coordinate the interrelated functions of capital investment, applications of scientific knowledge, and development of human capital. A spirit of experimental innovation will be promoted in an attempt to discover new social designs that effectively address seemingly intractible economic and social problems.

The judicial system is likely to play a more visible role in future state economic development efforts. Conflicts over basic constitutional matters are likely to arise. We have seen the beginning of such issues in Florida, North Carolina, and Virginia, in which the appropriateness of state and local government participation as equity owners in state-directed investments is being debated.

Policy Considerations

(1) importance of new cooperative institutional arrangements among universities, the state, and the private sector;
(2) potential for cooperative mechanisms for identifying and utilizing new technology in both new and existing industries;
(3) greater needs for interstate cooperation to lessen counterproductive competition for jobs and capital;
(4) impact of growth on the environment and on the quality of life;
(5) the need for incentives to encourage venture capital in underserved areas; and
(6) recognition of public schools as part of state and local infrastructures.

WORLD MARKETS FOR SOUTHERN AGRICULTURE PRODUCTS WILL EXPAND.

Even though the United States economy will become more service oriented and information based, agriculture will remain an important industry. In 1983, all agriculture-related industries from the farmer through the processors and suppliers to the retailers, provided the basis for 23 million jobs (although farming directly accounted for less than four million jobs). Agriculture, together with support industries, marketing, processing, and distributing, generates about 20 percent of the nation's GNP, and much of this is derived from export trade. Soybeans have replaced cotton as the South's leading agricultural product. It is the leading crop in seven SGPB states and the second leading crop in four others. The USDA predicts that the 1980 level of exports of soybeans will double by the year 2000.

After rapid growth in export trade in the 1970s, U.S. and southern exports declined in the early eighties. The competitive position of the South has been weakened by the strong dollar and increased productivity in less-developed countries, combined with good growing conditions in competing nations. Despite these factors, the South will continue to be a leader in world food trade, and over the next two decades both world markets and the U.S. share are expected to grow considerably.

Table 3

Projected Demand[1] for

Agricultural Exports

1981 - 2020

Commodity	Exports, Million Metric Tons		
	1979-81	2000	2020
Cereals	110	168	257
Oilseeds	33	54	82
Fiber	2	2	N/A
Cotton	1	2	N/A

[1]Based on no changes in per capita consumption

Source: U.S. Department of Agriculture, 1984

One reason for optimism is the world population growth. Even though the rate of growth has slowed, the world population is expected to increase by 1.7 billion by the year 2000. More than 90 percent of the increase will be in underdeveloped regions which are still heavily dependent on the United States for food. In 1980, the SGPB region exported $10.7 billion in food, fiber, and forest products. In the last two decades, the South added new cropland at a rate twice that of the rest of the nation.

Policy Considerations

(1) the need for agricultural research to support productivity growth;
(2) effects of increased agricultural production on water resources;
(3) effects of intense farming methods on quality of the soil;
(4) ways to increase participation of small farmers in world markets; and
(5) growth opportunies associated with industries and businesses related to agriculture.

THE SOUTH COULD BECOME THE "WOODBASKET" OF THE NATION.

Wood and lumber exports contribute substantially to U.S. exports. Demand for U.S. wood products has risen steadily over the last two years. In 1982 the U.S. exported $7.5 billion in lumber and wood products, nearly double its 1973 exports. The Southern Growth Policies Board region includes about 39 percent of all commercial timberland and, in 1982, accounted for about one-sixth of total U.S. timber exports. By the year 2000, global consumption is projected to increase by 56 percent, which includes doubling the demand for wood panels and paper products. Projections indicate that by the year 2000 the United States could become a net wood exporter. A recent forest industry committee charged with identifying opportunities for future timber management in the United States found that 70 percent of them were in the SGPB region.

The southern states, already major producers of wood products, have the potential to replace the Pacific Northwest as the nation's woodbasket and to profit from the increased global demand. In 1976, 45 percent of the nation's softwood came from the South; in 2030 the South's share is expected to be 51 percent.

Although the southern soil, climate, and native trees have given the region many natural advantages, there is concern that many private landowners are not adequately regenerating their harvested lands. Projections of timber demand indicate that in the 1990s and 2000s the forest industry will have to turn to private lands for the additional needed timber. Forests cover 37 percent of the South's land area, and 91 percent is privately owned. Forest industries own 21 percent of the private forest land, and the balance is controlled by non-industrial private owners. A forest crop takes decades to become ready for harvesting. Thus, to take advantage of growing world markets, the management and care of private, non-industrial forests must be improved.

In addition to the management problems, there are long-term environmental considerations. Southern forests may face some of the same pollution problems that are thought to be destroying European forests. Although in the past the South appeared to be free from many of the effects of air pollution, deterioration of trees recently was found at high elevations in the Southern Appalachians. Suspected causes include acid rain and other deposits of pollution from the air. This and other environmental changes may limit the growth of the southern wood industry.

Policy Considerations

(1) need for state forestry agency support for planning, promoting, coordinating, and providing services (fire/insect/disease control/technical assistance);
(2) potential to encourage private reforestation and management through appropriate tax incentives and education;
(3) knowledge of the effects of acid rain and other atmospheric contaminants;
(4) the need for public sector support to expand timber exports; and
(5) the need to respond to private sector needs for stronger industry organization with appropriate public policies.

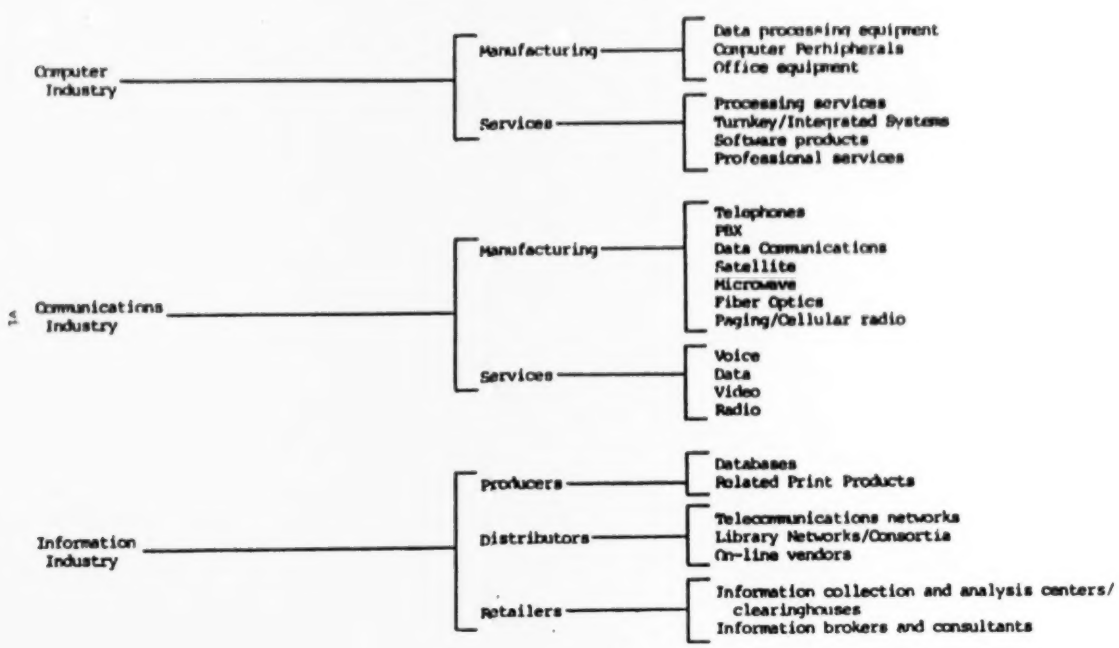
THE INFORMATION-PROCESSING INDUSTRIES HOLD THE GOLDEN KEY TO TOMORROW'S ECONOMIC GROWTH.

The transformation of the U.S. economy from an industrial to an information based economy has been tagged by futurist John Naisbett as the potentially most explosive of his "megatrends." Even though its timing and nature are being debated, the impact of this transformation on new business development is unquestionable. For the year 2000, it is estimated that 40 percent of the world's industrial value added will be in information industries. By 1990, electronic publishing alone is expected to be a $60 billion industry. The South will have to plan carefully to win a share of new markets for information processing, while at the same time continuing to support its traditional industries.

The increasing scale and rate of growth of information processing have already created a new, diverse sector of the economy. The information economy, as defined here, consists of three major segments: computer industries, communications industries, and information industries (see Figure 2). The computer industry has both manufacturing and service components. The former includes data processing and office equipment and peripherals, and the latter includes software and professional services. The communications industry also has a manufacturing component (e.g., fiber optics, satellites, and telephones), and a services component (e.g., video and radio). The

Figure 2

The Information Economy: A Summary



information industry has producers, distributors, and retailers. The last are the information centers, brokers, and consultants. The largest demand in the short run will be for hardware--data storage, memory systems, input/output, and office data systems, including word processors. In the more distant future, however, demand in information industries is likely to create more jobs.

Although there will be a net increase in employment opportunities in the information-processing industries, employment consequences will not be evenly distributed. Three broad patterns can be discerned: the transformation of jobs, the displacement of jobs, and the creation of jobs. The first includes many service jobs typified by the transition of secretaries to word processors. The second category, displacement due to new information technologies, includes the elimination not only of blue collar jobs but many middle management jobs. The third category, job creation, includes a large number of service and professional jobs dependent upon the manufacturing and widespread use of computer and communications technologies. The Bureau of Labor Statistics projects that by 1990 the computer industry alone will employ two million people, which is a 33 percent increase over 1980.

Policy Considerations

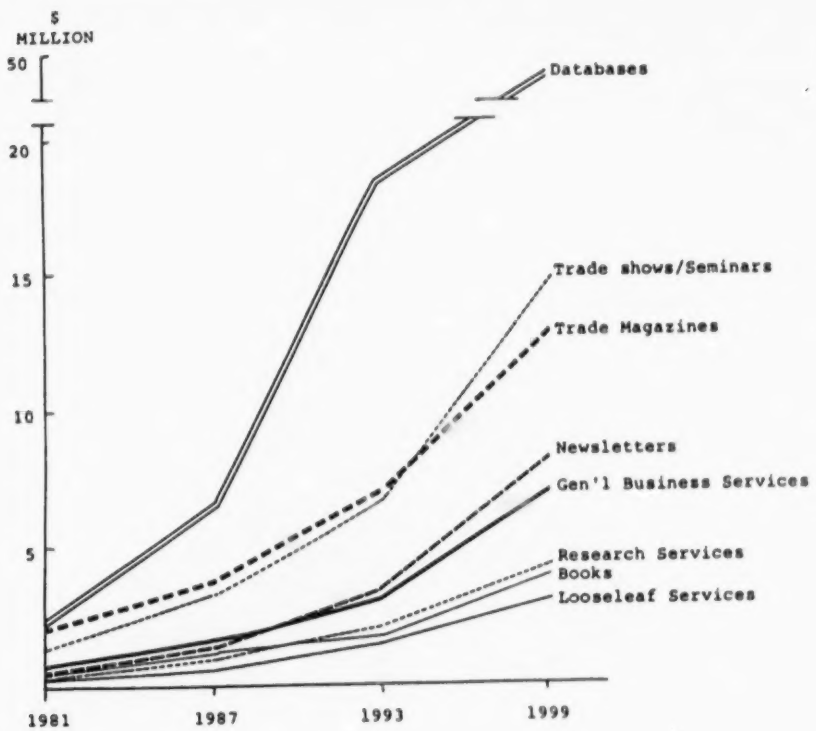
(1) requirements for new infrastructure to support information-processing industries;
(2) assessment of local consequences of new business growth--where businesses are likely to locate and why;
(3) advantages of support from university research and development;
(4) educational needs for emerging information-related occupations;
(5) demand for capital for new information-related and support businesses; and
(6) need for retraining of displaced workers.

THE SOUTH WILL HAVE A NEW TYPE OF INFRASTRUCTURE TO PRODUCE AND MOVE INFORMATION.

The demands for moving information twenty years from now will be as great as the demands for moving people and goods twenty years ago. The dollar value of the business information market alone is expected to more than double between 1981 and 1987 (see Figure 3), with the most rapid growth in data bases, from $2.6 billion to an estimated $7 billion. The development of an information infrastructure, therefore, eventually will be as important to the South's economy as the development of the interstate highway system was in the 1950s. Such a system will permit information to become a more effective strategic social and economic resource and will be an important factor in determining the region's share of new information industries and its ability to provide the communications network that other buinesses will require.

Figure 3.

ESTIMATED MARKET[1] FOR BUSINESS INFORMATION ($ Millions), 1981 to 1999.



[1]Assumes continuation of current growth rates

Source: Powers, 1984.

The primary advantage of an information infrastructure is its ability to support economic development. A shared, standardized information network generates jobs by enabling more businesses and government agencies to afford information services, to lower data communications costs, and to expand the marketplace for information products. A system that can efficiently move information will contribute to attracting and supporting service industries, to developing homegrown companies, to delivering business and social services more efficiently and responsively, and to providing better decision-making tools and customized information to consumers, business men and women, and government officials.

A central element in the infrastructure of the future probably will be videotex, a medium for delivering computer-based services such as home banking and shopping, electronic mail, consumer information, electronic balloting, access to government services and information, technical assistance to small businesses, and internal corporate communications. Videotex uses existing television screens and thus will be accessible to most of the population of the South. The systems in the region so far are fragmented and not always compatible with one another. Further, they are predominantly in affluent areas. In contrast, most other Western countries have adopted standardized videotex formats so that their systems are compatible.

In 1982, the worldwide customer base for videotex was 47,000 (up from 19,500 in 1981). Videotex-like services without graphics served another 113,000 users, more than double the previous year. Operations began in the United States in selected Florida counties by Knight-Ridder, Inc., with startups in Los Angeles and Chicago expected this year. A number of southern corporations, including BellSouth (network services), Southern National Bank, the Atlanta Journal and Constitution, NCNB (all information and service providers), OMNI cable (local cable system), and Georgia Power (home automation and security) have announced their participation in a new videotex venture called TranstexT, due to get underway next year. Projected market penetration by 1990 is estimated at from 7 to 20 percent. At present, however, both the U.S. and Japan trail the western European countries.

The role of the state in assuring the existence of an infrastructure for information will be quite unlike establishing the traditional infrastructure. It will be composed not of steel and cement, but of information. The states in the region increasingly may have to accept greater responsibility for distributing information to the public, for providing productivity-enhancing information to businesses and individuals, for promoting the development of videotex or other information networks, and for ensuring equal access to the information for all citizens, thus avoiding a discriminatory impact among socio-economic classes.

Widespread access is an important long-term consideration because access to information has political as well as economic dimensions. Future uses of videotex which have been touted include a "civic videotex service and civic education postal service" and "experiments in electronic balloting, initially for educational and polling purposes."

Policy Considerations

(1) the need to assess the extent to which competition in the information- processing and communications industries leads to development of adequate information and communications infrastructure;
(2) delineating the appropriate role of state governments as electronic information providers in the future;
(3) understanding the impact of deregulation of the Bell system;
(4) assessing the appropriate mix of public and private responsibilities in providing information/communications infrastructure; and
(5) the need for public policies to insure equitable access to information among regions, segments of the population, and citizens.

MANY SOUTHERNERS MAY TELECOMMUTE TO WORK.

Over the next twenty years, changes in the location of work may be as dramatic as changes in the content of work. With existing office technology, as much as 50 percent of central office work can now be performed in or near the home. "Telecommuting" (flexibility in the work site due to the use of computer and communications technology) has the potential to drastically alter commuting patterns. As futurist Jack Nilles of the University of Southern California predicts, "The microcomputer is the analog of the automobile: the telephone line and the communications satellite serve as the highways." He has estimated for the California Energy Commission that if telecommuting, including teleconferencing, is nominally accepted, the state of California could reduce its annual fuel consumption by more than 2 billion gallons by the year 2000. Moreover, it could affect the composition of the region's work force by expanding employment opportunities for retirees, injured and handicapped employees, those who want to live outside of reasonable commuting patterns, and parents who want to stay home with their children.

The National Academy of Science recently completed a report on telecommuting which forecasts that by the year 1995 there will be between 10 to 18 million telecommuters--either part time or full time, in their homes or in neighborhood satellite centers. Using the California energy study, the report predicts that full-time telecommuters will increase to 6 percent of all information workers and that another 25 percent will telecommute part time (either at their homes or local centers). Given high growth and high acceptance of telecommuting, the forecast is for 18 percent of all information workers working at home full time, 35 percent telecommuting to local centers, and 20 percent telecommuting part time.

Not surprisingly, businesses which have tested telecommuting are heavily concentrated in specific industries. Most process information (e.g., insurance, banking), or stand to gain from the use of telecommuting (computer systems, software, and communications). Despite factors supporting telecommuting, other factors may limit the rate of acceptance of telecommuting in other industries. First, the rate at which costs of telecommuting are reduced will influence acceptance. Second, until a larger proportion of the work force is "computer literate," until more of the population are educated to work without direct supervision, and until acceptable methods of monitoring work are assured, choice of work site for many will still be restricted. Third, and perhaps most important, many workers need, or simply prefer, to work with other people; they enjoy the routine of going to a central place of business. This is a particularly large deterrent to home-based work. Fourth, many managers who believe that they must see their employees in order to have control over their production will resist the shift.

The degree to which telecommuting becomes a significant trend in the South will depend on a number of future external conditions:

* faster-than-anticipated growth of the information sector, spurred by aggressive marketing by communications industries;

* labor market shortages acting as an incentive for businesses to adopt telecommuting for people who would normally have to leave the work force because of injury, retirement, or responsibilities for children or elderly family members;

* another energy shortage, restricting travel and encouraging businesses to reorganize to reduce commuting; and

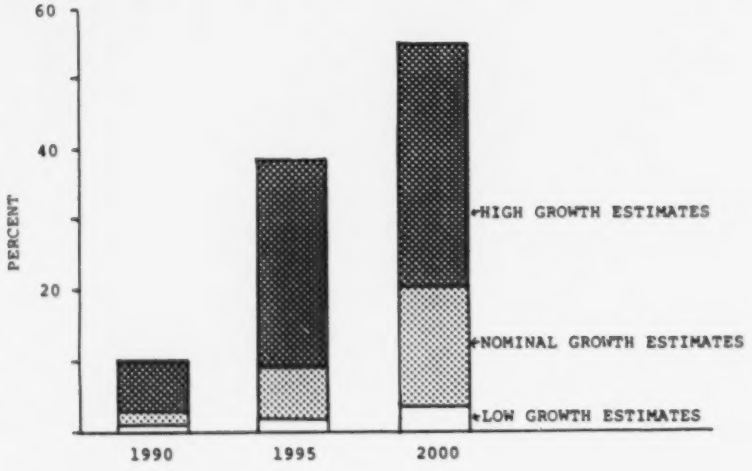
* demonstration of increased profitability--either because of greater productivity or reduction in overhead--leading to greater encouragement from management.

Policy Considerations

(1) need for expanding workplace regulations to include the home;
(2) pressures to protect workers' rights in remote sites, e.g. minimum wage and safety laws;
(3) consideration of telecommuting in the public sector to increase flexibility and reduce traffic congestion; and
(4) effects of an increase in women and older workers in the labor force.

Figure 4.

ESTIMATES OF THE PROPORTION OF THE LABOR FORCE TELECOMMUTING: 1990, 1995, 2000.



Source: Jack Nilles, 1983.

THE QUALITY OF THE REGION'S COASTAL AND SURFACE WATERS WILL HAVE TO BE PROTECTED.

The projected rapid growth of the southern economy will bring many benefits to the region. Growth, however, also increases long-term pressures on the environment, as well as on industries dependent on natural resources. The quality of surface and coastal waters, especially significant in southern states, is one of the chief concerns raised by growth. Adequate rainfall, rivers and lakes, and miles of shoreline (ten SGPB members have coasts) now provide the region with an abundance of water for recreation, industry, and commercial and residential uses. The challenge facing the South is to protect this abundance and to maintain and improve the quality of its water.

Rapid growth in SGPB states has, in some instances, resulted in an inability of governments and private providers to keep up with water treatment needs and sewage capacity. This has contributed to increased pollution of rivers, streams, and lakes. Industrial development has exacerbated the problem as pollutants from the building as well as the production of new plants and growing communities have been generated faster than clean-up processes were implemented. Therefore long-term projections for continued rapid growth, if current growth patterns are repeated, would be accompanied by increases in water contamination.

In addition to the consequences of industrial and urban growth, sediment caused by the runoff of pesticides and fertilizers used in agriculture lower water quality. The addition of these sediments to naturally high levels of nutrients suspended in southern waters combined with the long, warm growing season, results in eutrophication (oxygen deficiency).

Downstream, coastal water quality bears the brunt of local and upstream poor agricultural management practices and rapid industrial growth occur. The impact of pollution is especially severe on fragile estuarine environments. Estuaries are vital to the southern economy. For example, biologists believe that 90 percent of North Carolina's commercially important fish species spend at least part of their lives in estuaries, including the five species which account for 85 percent of the state's commercial catch by weight. The Chesapeake Bay has undergone a major shift in the finfish industry, from a primary catch of estuarine species (shad, herring, striped bass) to marine species (menhaden, bluefish, sea trout) as a direct result of deterioration of the Bay water quality. Along the Gulf, 90 percent of the commercial harvest is estuarine dependent, as are 70 percent of the recreational catch. Estuaries serve as pollution buffer zones for the coast, but their ability to perform this function declines as they disappear or become polluted. Ninety percent of the annual national loss of wetlands is currently in Louisiana, where 39 to 45 square miles succumb to natural and developmental pressures each year. Similar losses have occurred in the Mississippi River basin, the Delta, Galveston Bay, and Lower Mobile Bay.

A possible future economic victim of deterioration in coastal water in the South could be the tourism industry. In Florida, nine percent of

employment is related to coastally dependent tourism. Coastal tourism will decrease in the future if the water is no longer safe and pleasant for swimming and recreational fishing.

Prevention of long-term deterioration of surface and coastal water quality and improvement in current supplies are issues the South must face in the future. The region recognizes the problems and most states have taken preventive and corrective steps. The challenge, however, will be to anticipate the exponential nature of water contamination, as the water and sewage needs of both population growth and industrial growth combine. For the abundance and availability of surface water and coastal waters to remain an attraction and contribution to the future of the South, efforts will have to be made to preserve and protect them in preventive, proactive ways.

Policy Considerations

(1) adequacy of treatment of water to remove toxic substances;
(2) need for controls on the amount of toxic substances deposited into southern waters;
(3) need for public education for farmers regarding use of best land management practices and agricultural chemicals;
(4) means to improve land management practices to prevent erosion; and
(5) need for public education in conservation needs and methods.

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